

AMENDMENTS

Please amend the application as indicated hereafter.

In the Claims

Please cancel claim 19, 24-26, 37, 38 and 41 without prejudice waiver or disclaimer. Please substitute the following clean copy text for the pending claims of the same number.

36. (Once Amended) An apparatus for low-damage anisotropic dry etching of a substrate, comprising:

a plasma reactor having a plasma creation means, the plasma reactor adapted to have a plasma at a first electrical potential therein;

a mechanical support within said plasma reactor adapted to receive said substrate, wherein said mechanical support is electrically isolated from said plasma creation means;

a pulse waveform power source adapted to electrically bias said mechanical support and said substrate placed thereon, said pulse waveform power source providing a range of electrical bias to said mechanical support and said substrate placed thereon, the range of electrical bias extending from a second electrical potential, which is a negative potential and less than said first electrical potential, to a third electrical potential, which is positive and greater than said first electrical potential, whereby biasing said substrate to said second electrical potential attracts positive ions from said plasma to said substrate for electrically neutralizing said substrate and biasing said substrate to said third electrical potential attracts electrons from said plasma to said substrate for etching said substrate.

C2
39. (Once Amended) The apparatus of claim 36, wherein said pulse waveform power source
307
301
301
biases the mechanical support such that ions of the plasma are attracted to the substrate and
electrically neutralize the substrate without damaging the substrate.

C3
40. (Once Amended) The apparatus of claim 36, further including:
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a direct current power source adapted to electrically bias said mechanical support and said
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substrate placed thereon.

C4
42. (Once Amended) The apparatus of claim 36, wherein said pulse waveform power source
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alternates between applying to said mechanical support a fourth electrical potential ranging between
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the first and second electrical potentials and a fifth electrical potential ranging between the first and
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third electrical potentials such that at said fifth electrical potential said substrate is etched and
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charged by electrons of the plasma and such that at said fourth electrical potential excess electrical
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charge accumulated on said substrate is essentially neutralized by positive ions from the plasma
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adhering to the substrate.